

Figure 1

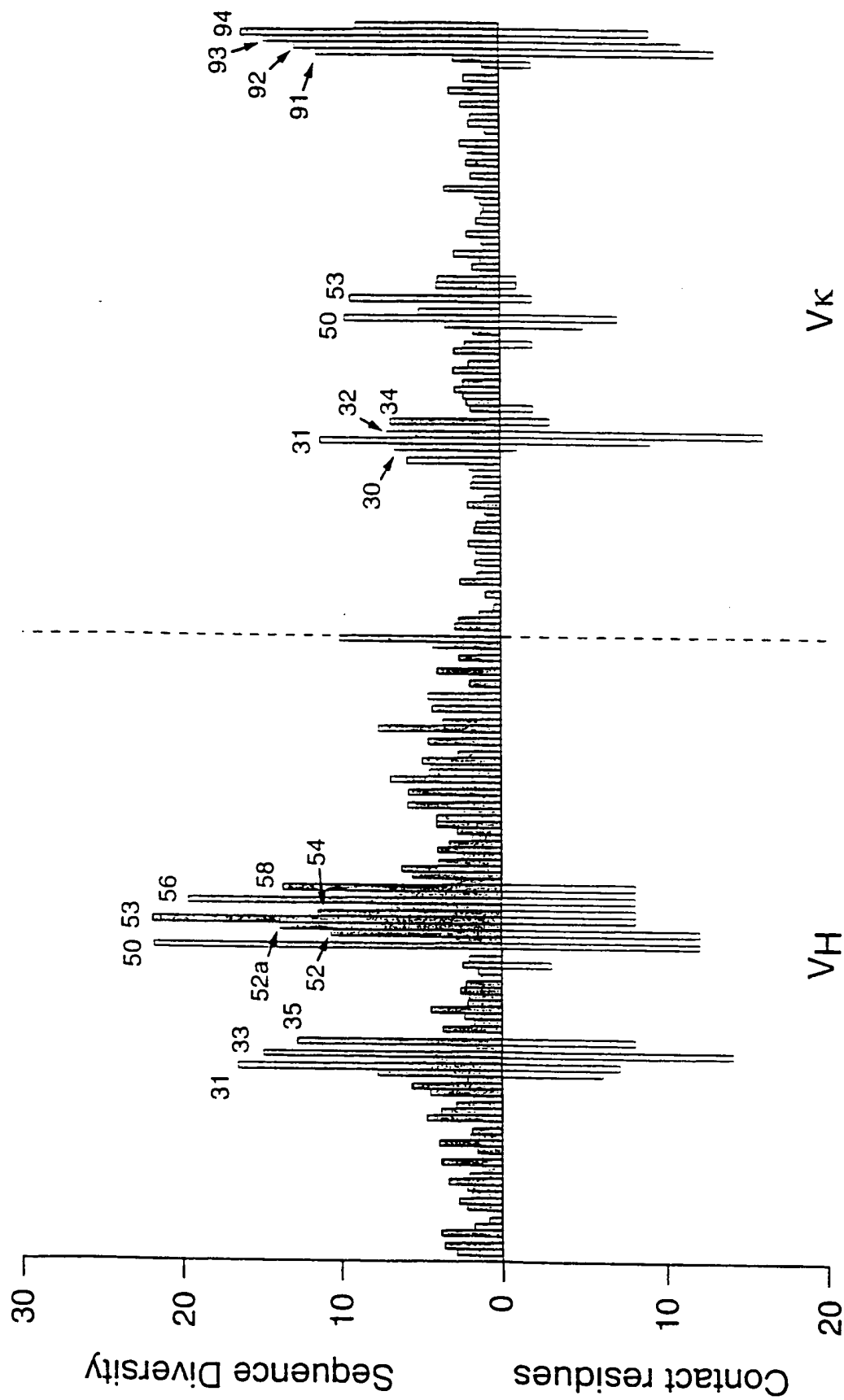
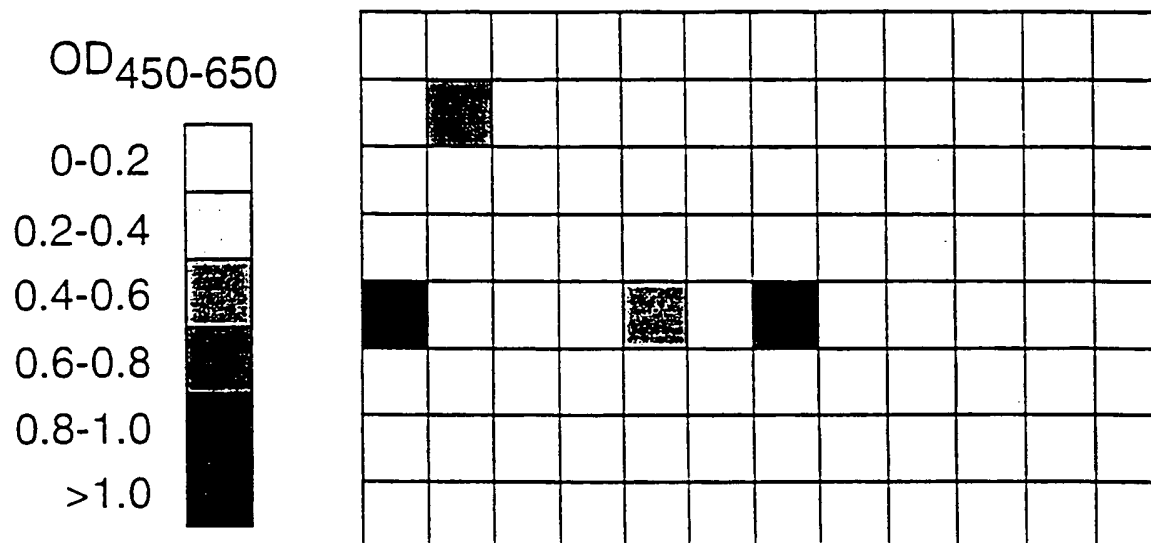


Figure 2

H11	E	V	Q	I	L	E	S	G	G	L	V	Q	P	G	G	S	L	R	L	S	C	A	A	S	G	F	T	F	S	H30	
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H10	S	Y	A	M	S	W	V	R	Q	A	P	G	K	G	L	E	W	V	S	A	I	S	G	S	G	S	T	Y	Y		
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	AGC	TAT	ACC	ATG	AGC	TGG	GTC	CAC	CAG	GCT	CCA	GGG	AAG	GGG																	

☐ Diversified in "Primary" library only  
☐ Diversified in "Somatic" library only  
☐ Diversified in "Primary" and "Somatic" Libraries

# "primary" NNK library before pre-selection



# "primary" NNK library after pre-selection

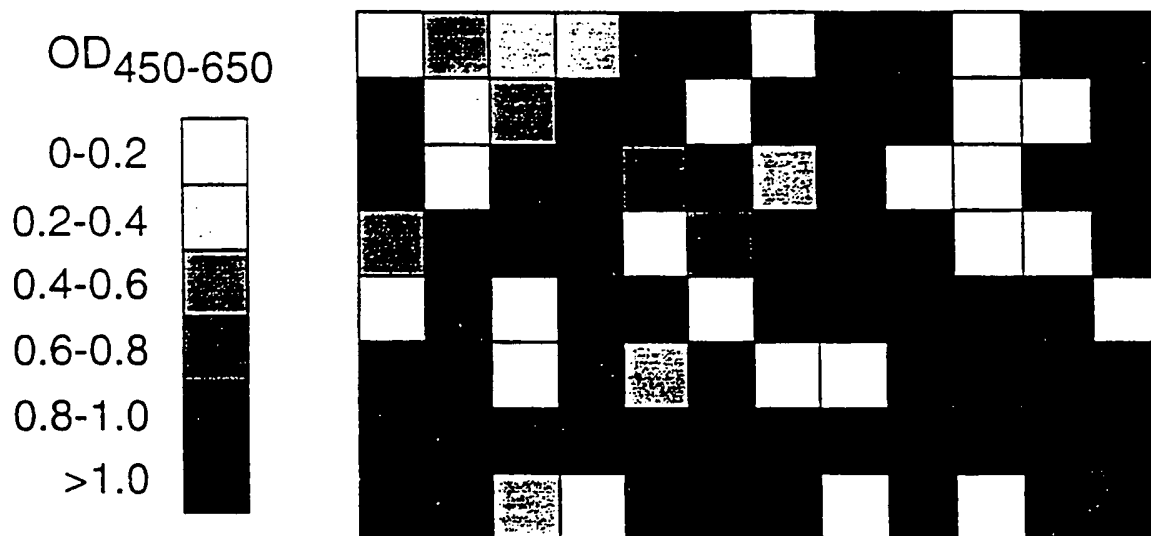


Figure 3

Figure 4

Clones	Antigen	Library	Heavy chain (framework DP-47)		Light chain (framework: DPK9)			No.	
			CDR1	CDR2	CDR3	CDR1	CDR2		
UBI A 1-9	Bovine Ubiquitin	Primary/NNK	SYAMS	<u>IIGSE</u> GWPTTYADSVKG	<u>GGSM</u> FDY	RASQSISSYLN	<u>RASS</u> LOS	<u>QQSSN</u> TPYT	9
UBI B 1,3-10	"	Somatic/NNK	AYAMT	AISGGGSTYYADSVKG	KASSFDY	RASQSISSYLN	AASSLOS	<u>QQSYST</u> PST	9
BIP A 1-3,6,9	Rat BIP	Primary/NNK	SYAMS	<u>LISPL</u> GKDTSYADSVKG	<u>RAGI</u> FDY	RASQSISSYLN	<u>HASR</u> LOS	<u>QQYRL</u> RPIT	5
BIP A 4	"	"	SYAMS	<u>GIRRV</u> GQATSYADSVKG	<u>GGRL</u> FDY	RASQSISSYLN	<u>YASH</u> LOS	<u>QQYL</u> DPYT	1
BIP A 5,7,9	"	"	SYAMS	<u>AINTK</u> GMITDYADSVKG	<u>GSOA</u> FDY	RASQSISSYLN	<u>QASF</u> LOS	<u>QQGYN</u> KPRT	3
BIP B 1-4,6-10	"	Somatic/NNK	NYQMH	AISGGGSTYYADSVKG	<u>GTRR</u> FDY	RASQSISSYLN	AASSLOS	<u>QQSYST</u> PYT	9
HISA 1,2,7-8	Bovine Histone	Primary/NNK	SYAMS	<u>AISPK</u> GRHTTYADSVKG	<u>RDKL</u> FDY	RASQSISSYLN	<u>EAST</u> LOS	<u>QQEKN</u> MPLT	4
HISA 6	"	"	SYAMS	<u>RITPA</u> GRHTTYADSVKG	<u>PSPP</u> FDY	RASQSISSYLN	<u>HASI</u> LOS	<u>QQGQH</u> RPLT	1
HISA 3,9	"	"	SYAMS	<u>RITPA</u> GRHTTYADSVKG	<u>QVSR</u> FDY	-	-	-	2
HISA 10	"	"	SYAMS	<u>TISPO</u> GLRTTYADSVKG	<u>GRPR</u> FDY	-	-	-	1
HISA 4	"	"	SYAMS	<u>TISPK</u> GRSTTYADSVKG	<u>TNR</u> FDY	RASQSISSYLN	<u>RASR</u> LOS	<u>QQRAK</u> KPPT	1
HISB 1,3	"	Somatic/NNK	KYRME	AISGGGSTYYADSVKG	<u>GRWP</u> FDY	<u>RASQSI</u> NNELLS	AASSLOS	<u>QQSYST</u> PHIT	2
HISB 6	"	"	RYRME	AISGGGSTYYADSVKG	<u>NEPR</u> FDY	<u>RASQSI</u> FMRLN	AASSLOS	<u>QQSYST</u> PST	1
HISB 2	"	"	RYRME	AISGGGSTYYADSVKG	<u>GYRK</u> FDY	<u>RASQSI</u> STLLN	AASSLOS	<u>QQSYST</u> PLT	1
HISB 4,7,9	"	"	RYRME	AISGGGSTYYADSVKG	<u>GYRK</u> FDY	<u>RASQSI</u> GIFPLS	AASSLOS	<u>QQSYST</u> PPT	3
HISB 5,8	"	"	RYRME	AISGGGSTYYADSVKG	<u>GYRK</u> FDY	<u>RASQSI</u> LRLTN	AASSLOS	<u>QQSYST</u> PGT	2
NIP A 2,7,10	NIP-BSA	Primary/NNK	SYAMS	<u>RIPAR</u> GTVTHYADSVKG	<u>GGLR</u> FDY	RASQSISSYLN	<u>HASAL</u> LOS	<u>QQSYR</u> KPIT	3
NIP A 3	"	"	SYAMS	<u>GISH</u> TGNTVTHYADSVKG	<u>RHKG</u> FDY	RASQSISSYLN	<u>RASR</u> LOS	<u>QQGYR</u> FPAT	1
NIP A 5,6,9	"	"	SYAMS	<u>RIAP</u> EGGRTKYADSVKG	<u>GRYWF</u> FDY	RASQSISSYLN	<u>RASR</u> LOS	<u>QQSFN</u> APIT	3
NIP A 1,8	"	"	SYAMS	<u>TISY</u> LGEKTRTYADSVKG	<u>SRRT</u> FDY	RASQSISSYLN	<u>KAST</u> LOS	<u>QQRSR</u> PPAT	2

Figure 4 Cont.

NIP B 1	"	Somatic/NNK	RYGMH	AISGSGGSTYYADSVKG	RGLGFDY	RASQSISSYLN	AASSLOS	QOYSTPLT	1
NIP B 2,4,7	"	"	SYRMV	AISGSGGSTYYADSVKG	RGMAFDY	RASQSIHRLS	AASSLOS	QOYSTPLT	4
NIP B 5,6	"	"	KYNMH	AISGSGGSTYYADSVKG	ARWRFDY	RASQSISSYLN	AASSLOS	QOYSTPIT	2
NIP B 8	"	"	RYRMH	AISGSGGSTYYADSVKG	TPRPFYD	RASQSIQMGLS	AASSLOS	QOYSTPNT	1
NIP B 9	"	"	RYRMH	AISGSGGSTYYADSVKG	TPRPFYD	RASQSIENIL	AASSLOS	QOYSTPLT	1
10 OG 1	FTC-BSA	Primary/NNK	SYAMS	ITSPYCKQTRYADSVKG	KSQHFDY	RASQSISSYLN	AASSLOS	QQRGGPPT	1
10 OG 2	"	"	SYAMS	ITTPRGSLTSYADSVKG	TAPPFYD	RASQSISSYLN	FASSLOS	QOSQIKPST	1
10 OG 3	"	"	SYAMS	GISAYGTVTYADSVKG	RRAGFDY	RASQSISSYLN	FASSLOS	QQPRHMPQT	1
10 OG 5	"	"	SYAMS	STINSGLATAYADSVKG	RSFRFDY	RASQSISSYLN	FASSLOS	QQRHINPPT	1
10 OG 6	"	"	SYAMS	GITTRGQITRYADSVKG	TYPKFDY	RASQSISSYLN	FASSLOS	QOSKLSPT	1
10 OG 7	"	"	SYAMS	ITPARGGHTKYADSVKG	SAKAFDY	RASQSISSYLN	QASNLOS	QORSAGPLT	1
10 DH 1	"	Somatic/NNK	MYRMG	AISGSGGSTYYADSVKG	RTFRFDY	RASQSIHRLS	AASSLOS	QOYSTPBT	1
10 DH 2,3	"	"	SYAMT	AISGSGGSTYYADSVKG	KTGMFDY	RASQSIHRLR	AASSLOS	QOYSTPBT	2
11 OG 1	Human	Primary/NNK	SYAMS	AINRRGSAITRYADSVKG	YUHTFDY	RASQSISSYLN	FASSLOS	QHPLRPQT	1
11 OG 2,3	boon	"	SYAMS	AINRRGSAITRYADSVKG	YUHTFDY	RASQSISSYLN	AASSLOS	QOSDLPST	2
11 DH 2	"	Somatic/NNK	RYRMV	AISGSGGSTYYADSVKG	RPSTFDY	RASQSIKNL	AASSLOS	QOYSTPST	1
11 DH 3	"	"	RYRMV	AISGSGGSTYYADSVKG	RPSTFDY	RASQSIKRLH	AASSLOS	QOYSTPST	1
12 OG 1,2	Human	Primary/NNK	SYAMS	SIAPAGRHITRYADSVKG	NIRIFDY	RASQSISSYLN	SASSLOS	QQRAGTPVT	2
12 OG 3	thyroglobulin	"	SYAMS	GITMTGHTTKYADSVKG	NSMIFDY	RASQSISSYLN	QASSLOS	QQRVLRPPT	1
12 DH 1,2,3	"	Somatic/NNK	RYEMS	AISGSGGSTYYADSVKG	GIFYAFDY	RASQSIKRLT	AASSLOS	QOYSTPBT	3
13 OG 1	BSA	Primary/NNK	SYAMS	ITIASGPNTRYADSVKG	NHSTFDY	RASQSISSYLN	FASSLOS	QQRHTAPBT	1
13 OG 2	"	Primary/DVT	SYAMS	TTYAGSNTRYADSVKG	GYTTFDY	RASQSISSYLN	YASSLOS	QQSDTSPIT	1

Figure 4 Cont.

13OG3	"	Primary/NK	SYAMS	<u>M</u> NP <u>G</u> G <u>Y</u> : <u>T</u> KYADSVKG	<u>N</u> AD <u>L</u> FDY	RASQSISSYL <u>N</u>	TAS <u>L</u> QOS	QQ <u>M</u> PRK <u>P</u> AT	1
13DH1	"	Somatic/NK	<u>L</u> YN <u>M</u> V	AISGGGGSTYYADSVKG	<u>E</u> WSRFDY	RASQSI <u>S</u> K <u>S</u> L	AASSLQOS	QQSYSTP <u>K</u> T	1
13DH2	"	"	<u>G</u> Y <u>M</u> S	AISGGGGSTYYADSVKG	<u>T</u> HDSFDY	RASQSIDR <u>V</u> L <u>N</u>	AASSLQOS	QQSYSTP <u>I</u> T	1
13DH3	"	"	<u>R</u> Y <u>Q</u> M <u>V</u>	AISGGGGSTYYADSVKG	<u>H</u> LSRFDY	RASQSIK <u>N</u> L <u>A</u>	AASSLQOS	QQSYSTP <u>P</u> IT	1
14OG1,2,3	Hen egg lysozyme	Primary/NK	SYAMS	<u>E</u> ILPRGHRTAYADSVKG	<u>S</u> GK <u>H</u> FDY	RASQSISSYL <u>N</u>	NASTLQOS	QQRK <u>L</u> P <u>E</u> T	3
14DH2,3	"	Somatic/NK	<u>Y</u> Y <u>E</u> M <u>L</u>	AISGGGGSTYYADSVKG	<u>P</u> FM <u>S</u> FDY	RASQSIH <u>D</u> L <u>V</u>	AASSLQOS	QQSYSTP <u>P</u> IT	2
19OG1,3	Mouse IgG	Primary/DVT	SYAMS	<u>S</u> IGSSGYGTGYADSVKG	<u>G</u> Y <u>Y</u> SFDY	RASQSISSYL <u>N</u>	DASSLQOS	QQSDSSP <u>Y</u> T	2
19DH2	"	Somatic/DVT	<u>D</u> Y <u>D</u> M <u>S</u>	AISGGGGSTYYADSVKG	<u>D</u> GAGFDY	RASQSIGSS <u>L</u> S	AASSLQOS	QQSYSTP <u>N</u> IT	1
20OG1	Human IgG	Primary/NK	SYAMS	AISGLGKQTRYADSVKG	<u>G</u> Y <u>S</u> RFDY	RASQSISSYL <u>N</u>	SASLQOS	QQLGTP <u>P</u> IT	1
20DH1	"	Somatic/NK	<u>R</u> Y <u>E</u> M <u>S</u>	AISGGGGSTYYADSVKG	<u>S</u> WT <u>L</u> FDY	RASQSI <u>F</u> T <u>N</u> I <u>D</u>	AASSLQOS	QQSYSTP <u>P</u> IT	1
20DH2	"	"	<u>R</u> Y <u>E</u> M <u>S</u>	AISGGGGSTYYADSVKG	<u>S</u> WT <u>L</u> FDY	RASQSIGT <u>L</u> L <u>R</u>	AASSLQOS	QQSYSTP <u>N</u> IT	1

\* of clones sequenced

Figure 5a

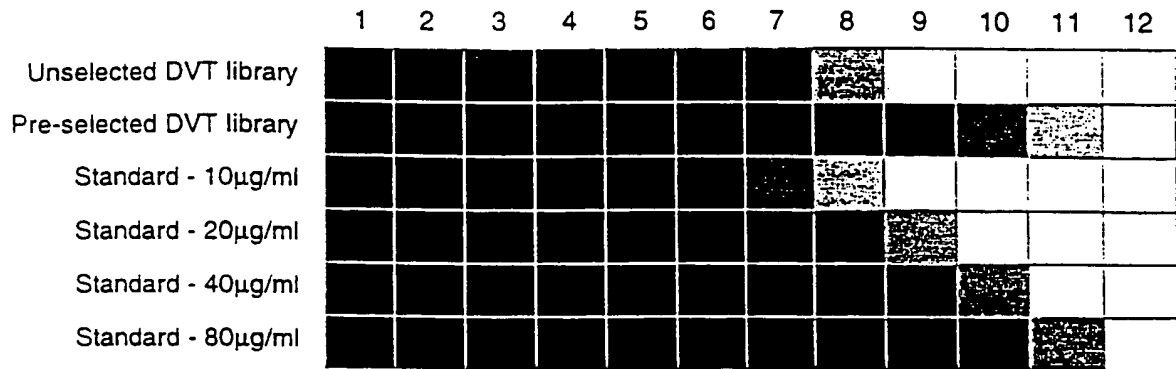
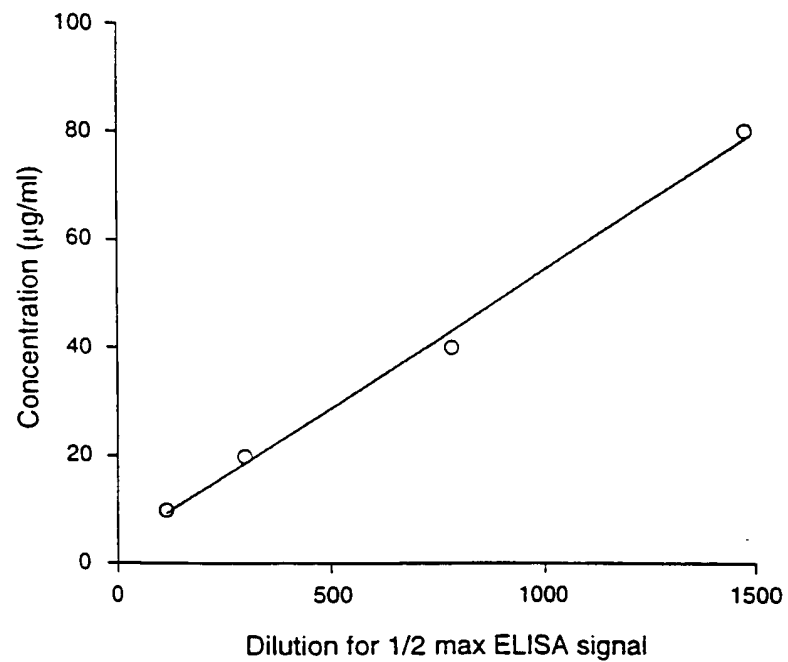
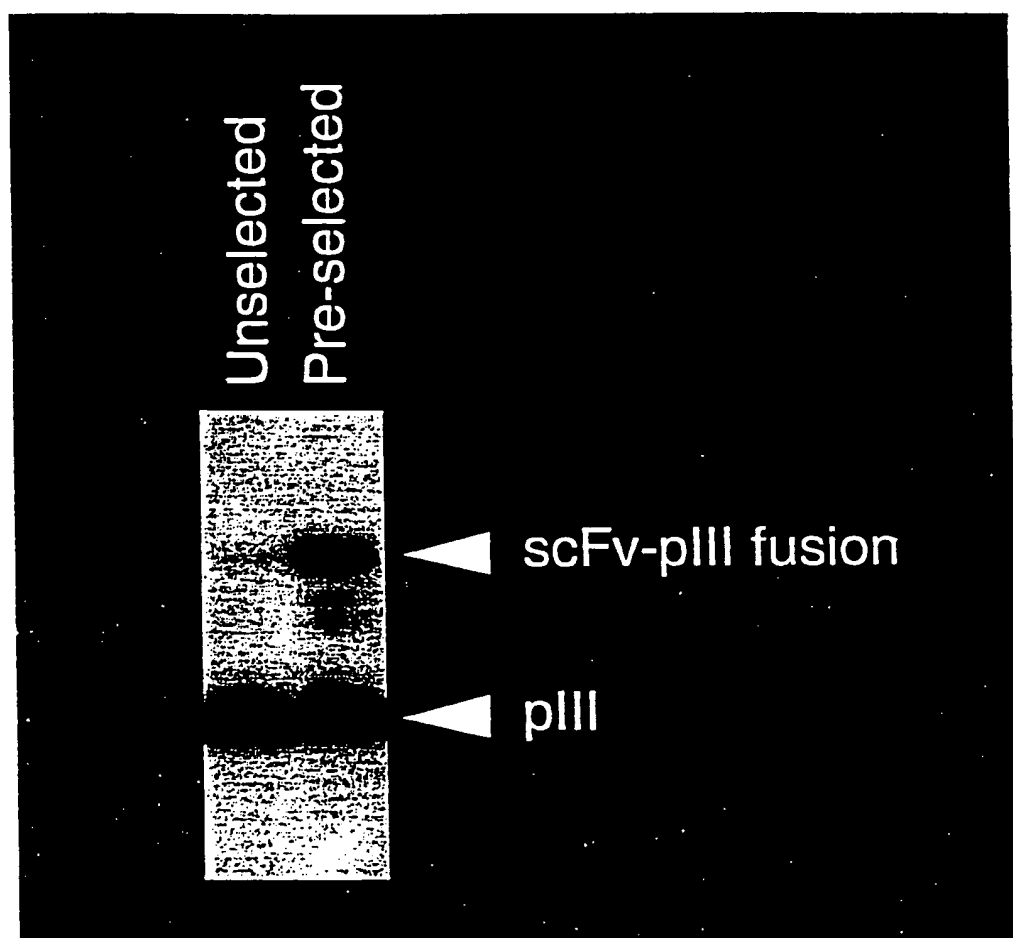


Figure 5b



004220" 6E6T56D

Figure 6



004220" 6E6T560